

6CM6

BEAM POWER TUBE

9-PIN MINIATURE TYPE

6CM6

GENERAL DATA

Electrical:

Heater, for Unipotential Cathode:

Voltage	6.3	ac or dc volts
Current	0.45	amp

Direct Interelectrode Capacitances (Approx.):°

Grid No.1 to plate	0.7	μμf
Grid No.1 to cathode, grid No.3, grid No.2, and heater	8	μμf
Plate to cathode, grid No.3, grid No.2, and heater	8.5	μμf

Mechanical:

Operating Position	Any
Maximum Overall Length	2-5/8"
Maximum Seated Length	2-3/8"
Length, Base Seat to Bulb Top (Excluding tip)	2" ± 3/32"
Diameter	0.750" to 0.875"
Dimensional Outline	*See General Section*
Bulb	T6-1/2
Base	Small-Button Noval 9-Pin (JETEC No.E9-1)
Basing Designation for BOTTOM VIEW	9CK

Pin 1 - Grid No.2
Pin 2 - No Connection
Pin 3 - Grid No.1
Pin 4 - Heater
Pin 5 - Heater
Pin 6 - Grid No.1
Pin 7 - Cathode, Grid No.3
Pin 8 - No Connection
Pin 9 - Plate

AMPLIFIER — Class A_1

Maximum Ratings, *Design-Center Values:*

PLATE VOLTAGE	315 max.	volts
GRID-No.2 (SCREEN-GRID) VOLTAGE	285 max.	volts
GRID-No.2 INPUT	2 max.	watts
PLATE DISSIPATION	12 max.	watts
PEAK HEATER-CATHODE VOLTAGE:		
Heater negative with respect to cathode	200 max.	volts
Heater positive with respect to cathode	200▲ max.	volts

Typical Operation and Characteristics:

Plate Voltage	180	250	315	volts
Grid-No.2 Voltage	180	250	225	volts
Grid-No.1 (Control-Grid) Voltage	-8.5	-12.5	-13	volts
Peak AF Grid-No.1 Voltage	8.5	12.5	13	volts
Zero-Signal Plate Current	29	45	34	ma
Max.-Signal Plate Current	30	47	35	ma
Zero-Signal Grid-No.2 Current	3	4.5	2.2	ma
Max.-Signal Grid-No.2 Current	4	7	6	ma

°,▲: See next page.

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Plate Resistance (Approx.)	50000	50000	80000	ohms
Transconductance	3700	4100	3750	μmhos
Load Resistance	5500	5000	8500	ohms
Total Harmonic Distortion	8	8	12	%
Max.-Signal Power Output	2	4.5	5.5	watts

Maximum Circuit Values:

Grid-No.1-Circuit Resistance:			
For fixed-bias operation	0.1	max.	megohm
For cathode-bias operation	0.5	max.	megohm

VERTICAL-DEFLECTION AMPLIFIER

Maximum Ratings, *Design-Center Values Except as Noted:*

For operation in a 525-line, 30-frame system□

DC PLATE VOLTAGE	315	max.	volts
PEAK POSITIVE-PULSE PLATE VOLTAGE# (Absolute maximum)	2000■	max.	volts
DC GRID-No.2 (SCREEN-GRID) VOLTAGE	285	max.	volts
PEAK NEGATIVE-PULSE GRID-No.1 (CONTROL-GRID) VOLTAGE	250	max.	volts
CATHODE CURRENT:			
Peak	120	max.	ma
DC	40	max.	ma
GRID-No.2 INPUT	1.75	max.	watts
PLATE DISSIPATION	8	max.	watts
PEAK HEATER-CATHODE VOLTAGE:			
Heater negative with respect to cathode	200	max.	volts
Heater positive with respect to cathode	200▲	max.	volts

Maximum Circuit Values:

Grid-No.1-Circuit Resistance:			
For cathode-bias operation	2.2	max.	megohms

VERTICAL-DEFLECTION AMPLIFIER

Triode Connection†

Maximum Ratings, *Design-Center Values Except as Noted:*

DC PLATE VOLTAGE	315	max.	volts
PEAK POSITIVE-PULSE PLATE VOLTAGE# (Absolute maximum)	2000■	max.	volts
PEAK NEGATIVE-PULSE GRID-No.1 (CONTROL-GRID) VOLTAGE	250	max.	volts
CATHODE CURRENT:			
Peak	120	max.	ma
DC	40	max.	ma
PLATE DISSIPATION	9	max.	watts
PEAK HEATER-CATHODE VOLTAGE:			
Heater negative with respect to cathode	200	max.	volts
Heater positive with respect to cathode	200▲	max.	volts

○,▲,□,#,■,†: See next page.



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Characteristics:

Plate Voltage	250	volts
Grid-No.1 Voltage	-12.5	volts
Amplification Factor	9.8	
Plate Resistance (Approx.)	1960	ohms
Transconductance	5000	µmhos
Plate Current	49.5	ma
Grid-No.1 Voltage (Approx.) for plate ma. = 0.5	-37	volts

Maximum Circuit Values:

Grid-No.1-Circuit Resistance: For cathode-bias operation	2.2 max.	megohms

c Without external shield.

▲ The dc component must not exceed 100 volts.

□ As described in "Standards of Good Engineering Practice Concerning Television Broadcast Stations," Federal Communications Commission.

This rating is applicable where the duration of the voltage pulse does not exceed 15 per cent of one vertical scanning cycle. In a 525-line, 30-frame system, 15 per cent of one vertical scanning cycle is 2.5 milliseconds.

■ Under no circumstances should this absolute value be exceeded.

† Grid-No.2 connected to plate.

CURVES
shown under Types 6V6 and 6V6-GT, within ratings, also apply to the 6CM6